

Appl. No. 10/696,715
Amdt. Dated 3/16/2006
Response to Office action dated 12/16/2005

Amendments to the Specification:

Please replace paragraph [0026] with the amended paragraph:

[0026] Furthermore, as shown in FIG. 1 and a conceptual timing chart of FIG. 2, the programmable microcomputer (battery controlling section, hereinafter referred to as "MC") 20 applies a voltage as load-controlling output through the resistor R4 to turn on and off the switching element Tr1. As shown in FIG. 2, when the MC 20 applies, for example, a voltage of 1 V or higher as the load-controlling output, the status of the switching element Tr1 changes from OFF to ON. When the switching element Tr1 is turned on, a current flows from the battery 10 to the resistor R3 and the switching element Tr1. This changes the voltage "AD In" (hereinafter referred to as "detected battery voltage") detected at the connection point between the voltage-dividing resistors R1 and R2. The MC 20 acquires information (hereinafter referred to as "voltage change information") relating to this change through an AD input terminal (in FIG. 2, the graph of "MC AD input"). Then, based on the acquired voltage change information, the MC 20 refers to a battery residual capacity characteristic table (battery residual capacity characteristics information) stored on a programmable ROM (storing section, hereinafter referred to as "ROM") or the like in the MC 20 to determine the residual capacity of the battery 10. The determined battery residual capacity is, for example, displayed with a display device of the device body.

Please replace paragraph [0024] with the amended paragraph:

[0024] In the present embodiment, as shown in FIG. 1, ~~in addition to~~ a resistor R3 as a pseudo load for allowing a current to flow from a battery 10, a switching element (switching transistor) Tr1 and a resistor R4 are provided added to the battery control circuit of FIG. 5 which is taken as a conventional art. Specifically, the resistor R3 and the switching element Tr1 connected in series are connected to the battery 10 in parallel in a configuration where the plurality of voltage-dividing

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resistors R1 and R2 (battery voltage detecting section, first and second voltage-dividing resistors) connected in series are connected to the battery 10 in parallel.

Please replace paragraph [0032] with the amended paragraph:

[0032] The aforementioned case where the voltage change information is the voltage recovery time will be described. As shown in the graph of "MC AD input" of FIG. 2 described previously, the MC 20 acquires the voltage change information. When the switching element Tr1 is OFF, the detected battery voltage is approximately 5 V. On the other hand, when the switching element Tr1 is turned on, the detected battery voltage decreases and varies around the values of 4.8 V, 4.6 V and 4.5 V. As described previously, the time period from the time when the status of the switching element changes from ON to OFF to the time when the decreased detected battery voltage recovers to the original voltage of approximately 5 V (e.g., a voltage equivalent to 95% of 5 V) is set as the voltage recovery time. As shown in the graph of "AD input" of FIG. 2, the time period (in this drawing, $[\Delta t]$) corresponding to the part of the graph represented by a broken line is the voltage recovery time. The voltage recovery time can be counted with the number of times of sampling the detected battery voltage.

Please replace paragraph [0042] with the amended paragraph:

[0042] Although the preferred embodiments of the present invention have been described in detail, it should be understood that various changes, substitutions, and alterations can be made therein without departing from spirit and scope of the invention as defined by the appended claims.